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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,076	02/09/2005	Erwin Rinaldo Meinders	NL 020780	4189
24737 7590 08/08/2007 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
			EXAMINER NGUYEN, LINH THI	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 08/08/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/524,076

**Applicant(s)**

MEINDERS ET AL.

**Examiner**

Linh T. Nguyen

**Art Unit**

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 3-8 and 10-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8, and 10-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kirino et al (US Paten Number 5732061).

In regards to claims 1 and 8, Kirino et al discloses a method and apparatus of recording marks representing data in an information layer of a record carrier (Fig. 18) the method comprising the acts of: irradiating the information layer, and writing a mark by a sequence of one or more write pulses (Fig. 18), said information layer having a phase reversibly changeable between a crystalline phase and an amorphous phase (Column 5, lines 8-12), wherein at least one of the write pulses in said sequence of two or more write pulses other than the first write pulse (Fig. 18, first write pulses  $l_{ph}+l_r$ ) in said sequence consists of  $n$  portions,  $n$  being an integer number larger than 1, the  $i$ -th portion having an  $i$ -th write power level (Fig. 18,  $lw_1+l_{ph}+l_r'$ ),  $i$  being an integer number in the range between 1 and  $n$ , the  $i$ -th portion preceding the  $(i+1)$ -th portion, and in that the  $i$ -th write power level is lower than the  $(i+1)$ -th write power level (Fig. 18,  $lw_2+lw_1+l_{ph}+l_r'$  is higher than  $lw_1+l_{ph}+l_r'$ ), the first write pulse having a constant power level (Fig. 1,  $l_{ph}+l_r'$  is constant).

In regards to claim 3, Kirino et al discloses the method, wherein at least one of the write pulses in said sequence of two or more write pulses consists of  $n$  portions of substantially the same duration (Fig. 18,  $lw_2 + lw_1 + lph + lr'$  has the same duration in 5T mark).

In regards to claims 4 and 7, Kirino et al discloses a method of recording marks representing data in an information layer of a record carrier (Fig. 18) the method comprising the acts of: irradiating the information layer, and writing a mark by a sequence of one or more write pulses (Fig. 18, (1)), said information layer having a phase reversibly changeable between a crystalline phase and an amorphous phase (Column 5, lines 8-12); and irradiating the information layer in between the sequences of one or more write pulses (Fig. 18, (2)) by a radiation beam having an erase power level (Fig. 18,  $lr$ ), the erase power level being higher than the first write power level in a first portion of a write pulse of the one or more write pulses (Fig. 18,  $lr$  is higher than  $lr'$ ) and being lower than an  $n$ -th write power level in a last portion of the write pulse (Fig. 18  $lr'$  is last write pulse), wherein the  $n$ -th power level is immediately followed by a further write power level, the further write power level being lower than the erase power level, wherein there is no decrease in a power level between the first write power level and the  $n$ -th write power level (Fig. 18, (2), the power level increases from  $lr'$  to  $lw_2 + lw_1 + lph + lr'$ ).

In regards to claims 5 and 10 Kirino et al discloses a method and apparatus of recording marks representing data in an information layer of a record carrier the method comprising the acts of: irradiating the information layer, and writing a mark by a sequence of one or more write pulses (Fig. 18), said information layer having a phase reversibility changeable between a crystalline phase and an amorphous phase (Column 5, lines 8-12), wherein at least one of the write pulses in said sequence of one or more write pulses comprises a write power level (Fig. 18), continuously increases as a ramp function (Fig. 18, the write power increases from  $I_{r'}$  to  $I_{w2} + I_{w1} + I_{ph} + I_{r'}$ ).

In regards to claim 6, Kirino et al discloses the method as claimed in claim 5, wherein the at least one of said at least one of the write pulses in said sequence of one or more write pulses also comprises a rear portion having a constant write power level (Fig. 18, rear  $I_{w2} + I_{w1} + I_{ph} + I_{r'}$  is constant), said constant write power level being higher than or equal to the highest write power level in the front portion including the ramp function (Fig. 18).

In regards to claims 11 and 12, Kirino et al discloses the method wherein said write power level continuously increases at least one of linearly and a higher-order function including a parabolic function or an exponential function (Fig. 5).

3. Claims 13, 14, 15, 17-19, 21-23, and 25 are rejected under 35 U.S.C. 102(e) as being unpatentable by Tieke et al (US Publication Number 20010043540).

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In regards to claims 13, 17 and 21, Tieke et al discloses a method and apparatus of recording a mark on a record carrier comprising the act of irradiating the record carrier with a sequence of pulses for writing the mark (Fig. 2A), wherein the sequence of pulses includes at least one of the continuously increasing as a ramp function (Fig. 2B, 4T mark) and a combination of a block-shaped pulse and a staircase-shaped pulse (Fig. 2B).

In regards to claims 14, 18 and 22, Tieke et al discloses a method and apparatus, wherein the staircase-shaped pulse includes a last portion having a larger duration than a previous portion (Fig. 2B).

In regards to claims 15, 19 and 23, Tieke et al discloses a method and apparatus, wherein the staircase-shaped pulse includes a last portion having twice a duration of a previous portion and twice a level of the previous portion (Fig. 2B, 4T mark).

In regards to claim 25, Tieke et al discloses the recording apparatus of claim 21, wherein the increasing pulse includes an end portion having a constant level (Fig. 2B, end portion Pr2 of 4T mark is constant).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16, 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tieke et al in view of Kirino et al.

In regards to claims 16, 20 and 24, Tieke et al discloses everything claimed in claim 13. However, Tieke et al does not disclose a method and apparatus, wherein a first pulse of the sequence of pulses has a first part at a beginning of the first pulse with a write power level which is at least one above and below an erase power level used in between sequences of the pulses for erasing a previously recorded mark.

In the same field of endeavor, Kirino et al discloses the method, wherein a first pulse of the sequence of pulses (Fig. 18) has a first part at a beginning of the first pulse with a write power level which is at least one above and below an erase power level (Fig. 18, 1r') used in between sequences of the pulses for erasing (e) a previously recorded mark (Fig. 18). At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the sequences of write pulses of Tieke et al to have the first pulse power level at least one above and below the erase power as Kirino et al suggested. The motivation for doing so would have been to record/reproduce on a high-density optical disk with high precision recording mark while increasing the speed.

### ***Response to Arguments***

Applicant's arguments, see page 19, filed 06/06/07, with respect to the rejection(s) of claim(s) 1 under Takada et al in view of Ishigaki have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kirino et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

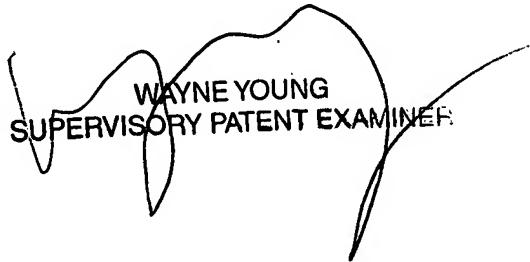
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN  
July 27, 2007

  
WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER